

In one embodiment of the invention, the stent has a distal and proximal section formed of rings or cylindrical elements and links. The rings and links are configured so that the air to metal ratio is less than 90% and preferably less than about 80% thus providing good scaffolding and providing a more cylindrical lumen. A central section is formed of stent struts that join the distal and proximal sections together. The central section strut pattern is less dense than the rings and links pattern of the distal and proximal sections. This central section scaffolds less, making the lumen less cylindrical. In use, the central section is aligned with an area of vulnerable plaque so that as smooth muscle cell growth occurs after the stent is implanted, in an attempt to form a cylindrical lumen, the central section strut pattern promotes cell growth over the struts and hence over the fibrous cap of the vulnerable plaque. This cell layer acts to protect the vulnerable plaque from rupturing and possibly embolising in the artery. Comparatively, the rings and links pattern of the distal and proximal sections inhibit smooth muscle cell growth thereby maintaining a patent lumen for blood flow. Thus, the present invention stent promotes cell growth where needed, to cover and reinforce the vulnerable plaque area, and inhibits cell growth in other areas so that the lumen (artery) remains patent for maximum blood flow.

IN THE CLAIMS

Please add the following new claims:

53. An intravascular stent for use in a body lumen, comprising: